Report on Food Waste of Vietnam
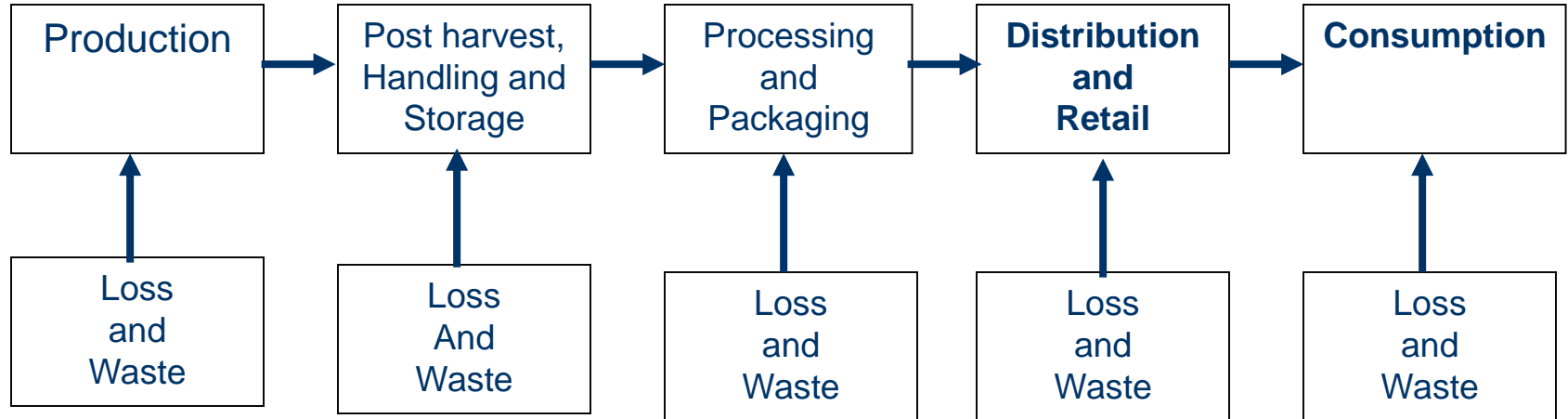
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1) Food supply chain and food loss at retail and consumer levels

Production	→	Post harvest, Handling and Storage	→	Processing and Packaging	→	**Distribution and Retail**	→	**Consumption**

Loss and Waste	Loss And Waste	Loss and Waste	Loss and Waste	Loss and Waste

About the retail and consumer levels:

- Whole country have 724 supermarkets, 132 commercial centers, 8546 markets (traditional market) and hundreds of convenient shops;

- Gross Retail Sales of goods and services of Vietnam: 130 billions USD

- Market share:
    + Traditional retail: 80% of Gross Retail Sales of goods and services
    + Modern retail: 20% of Gross Retail Sales of goods and services

- Population: 90 millions, of which:
    + 67% live in country areas
    + 33% in urban areas
    + 29% in poverty (Human Poverty Index)/13% (National Poverty Index)

Food loss and waste assessments:

- Food is lost and wasted throughout the food supply chain, from initial agricultural production down to final household consumption.

- In medium- and high-income countries food is to a high extent wasted, meaning that it is thrown away, even if it is still suitable for human consumption. Significant food loss and waste occur earlier in the food supply chain.

- In low-income countries food is mostly lost during the production-to-processing stages. Food wasted at consumer level is minimal.

Loss in retail

Some of the main drivers for in-store retail loss:

- Large quantities on display and a wide range of products/brands in supply lead to food waste.

- Expired "sell by" dates. Almost all of this food is still consumable. But, in fact, most stores pull items before the sell-by date.

- Damaged goods, outdated promotional products. Products are also discarded due to damaged packaging or promotions that have passed (post-holiday discards are most common).

Loss in Service (restaurants, cafeterias, fast food shops…)

- Plate waste is a significant contributor to losses in food service, resulting primarily from large portions and undesired accompaniments.

  Diners leave meals uneaten of which great part of these potential leftovers are not taken home.

- Particularly wasteful are large buffets and parties (wedding, welcome, opening ceremony…) which cannot reuse or even donate most of what is put out because of health code restrictions.

Loss in Household

• Household waste is due to food spoilage (from not being used in time) and cooking or serving too much.

• Some drivers for household loss include:

+ Spoilage. Food spoils due to improper or suboptimal storage, poor visibility in refrigerators;

+ Impulse and bulk purchases. Store promotions leading to bulk purchases or purchases of unusual products;

+ Poor planning. Lack of meal planning and shopping lists, inaccurate estimates of meal preparation, and impromptu restaurant meals can lead to purchased food spoiling before being used.

2) Retail stakeholders, consumer groups suitable for research and data gathering in Vietnam

- Retail: Supermarkets (Big C, CooMart, Metro, VinMart, Hapro, LotteMart, MAXIMARK, Fivimart…), Commercial centers (Vincom Mega Mall, Aeon Mall, Lotte Center,..), Convenient shops (VinMart+, CooFood, HaproFood, B'Mart,..)

- Service: Big Restaurants, Buffets, Events Centers (wedding, welcome, opening ceremony party…)

- Household: Who are living in apartments, buildings

3) Current status of food loss and waste research (e.g., prevention, reduction, recovery and recycling) in Vietnam and the application to the food industry and consumers

- Research on food loss and waste: Up to now, none. So, data is not available
- Post harvest: in 2007, a study have been done in order to formulate a strategy of post harvest of rice, maize, soybean and groundnut to 2020.
  Post harvest loss data of those products:

  + Rice: 13,7% (for Mekong delta) and 11,6% (for Red River Delta)

  + Maize: 18-19%
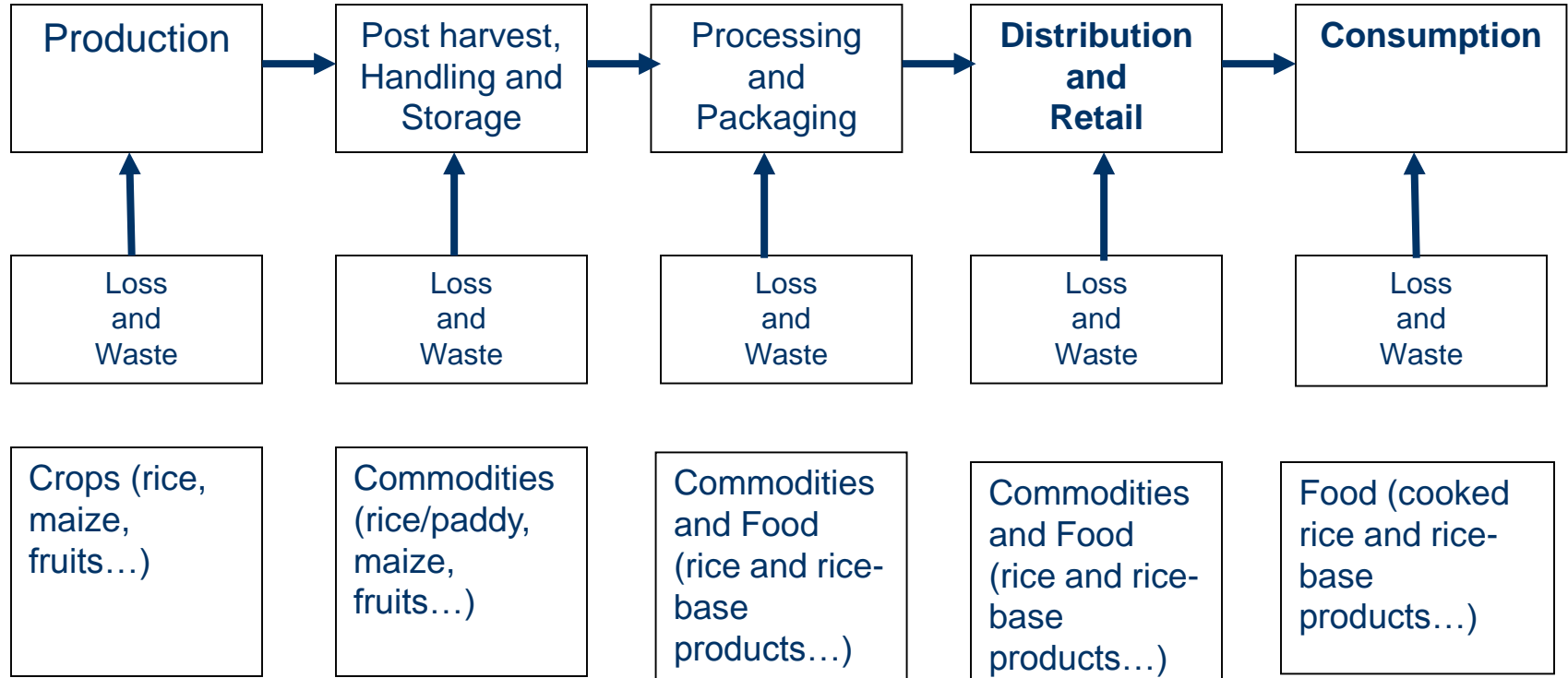
  + Soybean: 6,2-14,0%

  + Groundnut: 8,5-15,5%

  Losses in drying, storage, milling and processing represents 70% of total post harvest losses
- In 2016, a study on post harvest of rice in Mekong River Delta and coffee in Central Zone (Tay Nguyen's provinces) have been proposed to the project "Sustainable Agriculture Transformation in Vietnam" (VnSat project funded by WB, 300 millions USD)

4) Existing information gaps and recommendations for data gathering and future research

- Food loss refers to a decrease in mass (dry matter) or nutritional value (quality) of food that was originally intended for human consumption. These losses are mainly caused by inefficiencies in the food supply chains, such as poor infrastructure and logistics, lack of technology, insufficient skills, knowledge and management capacity of supply chain actors, and lack of access to markets.

- Food waste refers to food appropriate for human consumption being discarded, whether or not after it is kept beyond its expiry date or left to spoil. Often this is because food has spoiled but it can be for other reasons such as oversupply due to markets, or individual consumer shopping/eating habits.

The way for gathering data: **Stakeholder interviewers**

| Production | → | Post harvest, Handling and Storage | → | Processing and Packaging | → | **Distribution and Retail** | → | **Consumption** |

Production ← Loss and Waste

Post harvest, Handling and Storage ← Loss and Waste

Processing and Packaging ← Loss and Waste

Distribution and Retail ← Loss and Waste

Consumption ← Loss and Waste

| Crops (rice, maize, fruits…) | Commodities (rice/paddy, maize, fruits…) | Commodities and Food (rice and rice-base products…) | Commodities and Food (rice and rice-base products…) | Food (cooked rice and rice-base products…) |

5) Initiatives/programs to prevent, reduce, recover or recycle food waste in Vietnam: Set up a national programs

- Targets:
    To reduce food loss and waste throughout the supply chain

- The programs could be consists of some different components, such as:
    + Component 1: Production, Post harvest and Processing
    + Component 2: Distribution, Retail and Consumption
    + …

- Main solutions for component 2 (suggest)
    1. Raising public awareness
    2. Improving infrastructure and storage facilities
    3. Improving/Developing new technologies, technique
    4. Creating incentives
    5. Setting up pilots/demonstrations/campaigns

Component 2: Reducing food loss and waste at retail and consumer levels

1/ Raising public awareness

- Targets: To help the food chain actors (retailers, consumers…) to get known the impact of, and solutions for, food loss and waste

- Expected Output/Achievements:
    + A communication and media campaign, a dissemination of findings and results from surveys
    + Forum, workshop on food loss and waste, stakeholders might understand the curent status, causes, prevention and benefit of reducing wasted foods *(Saves money from buying less food; Reduces methane emissions from landfills and lowers carbon footprint; Conserves energy and resources, preventing pollution; Supports community by providing donated food)*
    + …

2/ Improving infrastructure and storage facilities

- Targets:

+ To improve infrastructure for modern markets such as supermarkets, commercial centers… (roads and energy also)

+ To improve storage and cold chain facilities

- Expected Output/Achievements:

+ Market share of modern retail increase

+ Food losses in storage decrease

+ …

3/ Improving/Developing new technologies, technique

- Targets: To encourage innovation in online solution and new technologies to reduce food loss and waist

- Expected Output/Achievements:

+ Appropriate technologies/technique of storage *(To extend   products life, to reduce losses and to detect products states)*

+ Smart phone application *(To help consumers to know how long products have been in the refrigerator; to plan appropriate portions…)*

+ Websites *(To help connect those with surplus food to those in need)*

+ Label *(That could address date labeling confusion)*

+ …

4/ Creating incentives

- Targets: To encourage donation of edible food and to prevent waste of food

- Expected Output/Achievements:
    + Tax deduction for small business that donate food
    + Amenities for food waste *(Extra for bill calculated on raw material food price)*
    + …

5/ Setting up pilots/demonstrations/campaigns

- Targets:

    + To reuse food for charities

    + To recycle for feed animal, compost

- Expected Output/Achievements:

    + Pilot 1: Supermarkets, Commercial Centers… /to donate foods "Best Before Date"

    + Pilot 2: Restaurants, Event Centers, Food outlets, Cafeteria,…/to recycling discarded foods "Use By Date"

    + …

Information on the project "Stop Wasting Food" in Vietnam

- Scale: in Ho Chi Minh City, Viet Nam

- Duration: 3 years, started from July 2015

- By: NGO

- Activities:

    + To carry out a communication and media campaign on social network with the name "eat out" to raise awareness on the impact of, and solution for, food loss and waste.

    + To cooperate with 30 restaurants in Ho Chi Minh city to carry out food charities named "Two thousands meals for poor children"

THANK YOU